

**SWITCH  
TO  
406**

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**National  
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**The ongoing  
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beacons**

**Deadline to  
obtain your  
pleasure craft  
operator card:  
September  
2009**

# SARSCENE

The Canadian Search and Rescue Magazine Online

December 2008 Vol. 17, #3



## SARSCENE 2008

Strengthening partnerships in  
the SAR community



Government  
of Canada  
National Search  
and Rescue  
Secretariat

Gouvernement  
du Canada  
Secrétariat national  
Recherche et  
sauvetage

Canada

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Facts and opinions in SARSCENE are those of the individual contributors and do not necessarily reflect the position or policies of the Secretariat.

Cover photo courtesy of Doug Allen

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**Pair Rescued from Cliff**

19 WING COMOX – A 442 Transport and Rescue Squadron CH-149 Cormorant helicopter rescued two Victoria climbers from Mt. Arrowsmith early on October 27, 2008. The pair used their cell phone to call for help which led to the Cormorant being tasked to the mission by the Joint Rescue Coordination Centre in Victoria.

"It appeared like the two climbers got lost on their descent," said Sgt. Wade Simpson, the search and rescue (SAR) team leader from the mission. "They were well prepared for the hike, but reached a point where they didn't want to continue in the darkness. They tied themselves in on the rock wall and called for assistance."

Port Alberni Ground SAR was on scene when the Cormorant arrived, initiating a rescue from the base of the mountain. The pair was located 1750 meters up the mountain on the side of a cliff, making ground rescue challenging in the dark. The Cormorant easily found the two climbers, but it was the crew's continuous training at climbing cliffs such as the Devil's Ladder at the Comox Lake that prepared them for the challenging hoist.

"Practicing at the Devil's Ladder came into play big time on this one," said Sgt. Simpson. "The pair was located on a small ledge of a sheer cliff wall, and the techniques required for the crew to perform hoists in this situation were well practiced aiding in the crew's comfort level. We were really happy to be able to do that mission so that the Ground SAR didn't have to climb in the night. Mountain rescue climbs at night are that much more difficult, all you have is your headlamp on, it's harder to find holds and you can't find route selection."

After the climbers were extracted from the cliff wall, they were flown to a pad near Port Alberni where they were transferred to Port Alberni Ground SAR.

Cormorant Crew: Capt. Mulholland, Aircraft Commander; Maj. von Kruse, First Officer; Cpl. Legendre, Flight Engineer; Sgt. Simpson and Master Cpl. Seguin, SAR Techs. ■

**Six People Rescued by 413 Squadron near Moncton, N.B.**

14 WING GREENWOOD – Six people, two children and four adults were rescued three nautical miles north of Moncton, New Brunswick by members of 413 Transport and Rescue Squadron (413 Sqn) early on November 2, 2008. The Joint Rescue Coordination Centre in Halifax (JRCC) received a call from the Shédiac RCMP around 9:50 p.m. Saturday night requesting assistance in locating the six individuals whose truck had become stuck in an off road trail. The JRCC then called 413 Sqn to dispatch a CH-149 Cormorant helicopter to search for them.

The Cormorant located the stranded people around 1:00 a.m. and commenced to hoist them into the helicopter where they were given initial medical treatment for hyperthermia by Search and Rescue Technicians. "Everyone has found themselves in a difficult predicament every now and then and thankfully we managed to locate and rescue them before this situation became worse," stated Cormorant pilot Captain Jean Leroux. The 413 Sqn then transported the individuals to the Moncton airport where ambulances were waiting to transport them to the local hospital. ■

## Local kids treated to a show as military search and rescue technicians parachute from helicopter to spruce up annual collection of boxes of presents for children

By Joel Wiebe

Peterborough This Week ([mykawartha.com](http://mykawartha.com))

More than 230 boxes of Christmas presents, destined for children in third world countries, were collected on November 19, 2008, as part of an awareness campaign for Operation Christmas Child.

Search and rescue technicians hurled themselves out of a yellow military helicopter above the EMS headquarters on Armour Road, drifting down under parachutes above a crowd of a few hundred cheering children.

Operation Christmas Child is an international campaign run by Samaritan's Purse to provide children in third world countries with Christmas presents. The shoebox-sized presents are filled with stuffed animals, pencils, crayons, tooth brushes, paper, soap, and many other items people buy.

Last year, those in Peterborough and the surrounding area collected about 6,000 boxes, contributing to the 600,000 across Canada and 7.6 million collected world-wide. "It's such an easy thing to do," says Samantha Cameron, a co-organizer of the event. She says all people need to do is go to a dollar store and spend \$10 on stuff to fill the boxes with.

As for the mini-airshow, Ms Cameron says it wasn't too hard to get the military on board. She filled out some paperwork online and they took her up on the offer. It was the search and rescue crew that pushed to add parachuting to the show. "We had quite a huge hubbub here in Norwood," says Ilona Bennett, the organizer of Operation Christmas Child in Norwood. The helicopter first flew to Norwood to put on a show, picked up some boxes, then flew to Peterborough. "We have never had anything like this," she says. "It's all about the shoeboxes." Last year she collected about 700 boxes and is hoping to get 1,000 this year.

The idea for helicopters came from the methods used to deliver the boxes to the children. Though the presents leave Canada on an airplane, delivery is sometimes handled by helicopters and camels because there are no roads to where the children live.

Randy Mellow, manager of operations at the EMS Headquarters, says they have been involved with Operation Christmas Child for four years, with this year being their most involved and will be hard to top. He says

people in Canada are very fortunate to be able to give away the boxes to those in need. "The boxes end up making a difference," he says.

One part he enjoyed is getting to know the search and rescue crews, whom they usually meet briefly in situations where someone is missing. "We never get an opportunity to do something like this with them," he says.

It only took the CH-146 Griffon helicopter about 10 minutes to fly to Peterborough from Norwood, and about 15 to 20 minutes to fly in from Canadian Forces Base Trenton. "Once the doors open, it gets a little chilly," says Major Jen Kennedy, the pilot, referring to the Search and Rescue technicians jumping from the helicopter. The boxes all go to a collection centre in Kitchener before they get distributed around the world. ■

## Three rescued from barge by Greenwood Search & Rescue

By 14 Wing Public Affairs

HALIFAX- Three men were rescued from a barge 25 nautical miles north west of Yarmouth, Nova Scotia, on November 19, 2008, by a CH-149 Cormorant helicopter from 413 (Transport and Rescue) Squadron based at 14 Wing Greenwood, N.S. The Cormorant was returning to Greenwood from training in Summerside, P.E.I. when the Joint Rescue Coordination Centre in Halifax tasked the helicopter at 2:15 p.m. to assist the barge, "Shovel Master," which was in trouble off the coast of Nova Scotia.



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SARSCENE

MCpl Julien Gauthier, SAR Tech, 413 Squadron, 14 Wing Greenwood.

Photo Credit: Cpl Kevin Sauve

The weather played a major factor in the rescue as there were high winds and rough seas as well as icing conditions (see attached photo). A CC-130 Hercules transport aircraft from 413 Sqn also provided on-scene assistance for the Cormorant during the rescue which lasted about one hour. The three men on the Shovel Master were each hoisted from the sea in survival suits with the assistance of Canadian Forces Search and Rescue Technicians (SAR Techs). The barge was not safely accessible due to obstacles on the vessel which made it too hazardous for a hoisting rescue.

The men were reported in good condition with no injuries and were flown to the Yarmouth airport where an ambulance was standing by to check over the crew. Ten minutes following the rescue, the barge capsized and the towing vessel released its line without incident. ■



2  
SARSCENE

*The barge as seen from the CC-130 Hercules with the CH-149 Cormorant arriving on scene.*

**Photo Credit:** Sgt Stephane Roy

## **ELT PERFORMANCE STUDY: 2003-2008**

By NSS Staff

The National Search and Rescue Secretariat undertook a study for the period of January 2003 to December 2007, in order to develop a clear understanding of the current performance of emergency locator transmitters (ELTs) in Canada. Defence Research and Development Canada and CAE Professional Services have also commissioned a research study in the summer of 2008, on the results of ELT false alarms for the period of January 2006 to October 2008. That study is expected to be finalized in early 2009.

While the research is not yet complete, preliminary results are providing some good insight. The success rate based on 121.5 MHz ELTs (including both TSO C91 and C91a compliant ELT installations) was demonstrated to be 74% with an accuracy of 6.07% and a 95% confidence rate. The ELT false alarm rate was shown to remain between 88 and 94% as expected, with great success demonstrated in resolving 406-related events without having to commit valuable flying resources.

Data continues to be gathered on the performance of the expanding population of 406 MHz ELTs in Canada. The outlook is very promising with the recent study on the effectiveness of 121.5 MHz ELTs demonstrating performance in line with the 1990 NASA study, which projected that second generation 121.5 MHz ELTs would provide a success rate of 73%, and the new 406 MHz ELTs would provide a success rate of 83%. Better understanding of ELT performance is anticipated in the near future as the Transportation Safety Board has undertaken an in-depth study on that subject. ■

**Fare thee well, Peter**

It is with great sadness that the National Search and Rescue Secretariat (NSS) bids farewell to **LCol (Ret'd) Peter Howe**, who passed away on November 7, 2008, after a courageous battle with cancer.



LCol (Ret'd) Peter Howe, 1950-2008.

Born in England, Peter Howe and his family emigrated to Canada when he was a young man. Earning a mechanical engineering degree from the Royal Military College in Kingston, Ontario, Peter went on to a distinguished 33-year career with the Canadian Forces. Qualified as an air navigator, Peter held many operational and leadership positions in both air transport and search and rescue, including officer-in-charge of the Canadian Mission Control Centre in Trenton, Ontario, staff positions at National Defence Headquarters, and commander of overseas humanitarian airlift missions.

After leaving the military, Peter first worked with Transport Canada and then joined the NSS in 2002 as the Director of Federal Coordination. During his time with the Secretariat, Peter oversaw the Search and Rescue New Initiatives Fund, and worked extensively with the international COSPAS-SARSAT programme, becoming a dear and respected colleague to many at home and abroad. At the annual SARSCENE conferences, Peter's easy laugh and gracious demeanour as master of ceremonies put the finishing touch on several opening ceremonies and awards banquets.

Though Peter will be profoundly missed, his contributions to search and rescue will prevail. The NSS extends its sincere condolences to Peter's wife Dr. Jane Bruce, his children Kate, Erica, and Kevin, and all those who were fortunate to count themselves among Peter's friends, family, and colleagues.

**Best Presentation Award**

Richard Paiement, a Project Leader with Advanced Systems and Technologies, at Communications Research Centre Canada, has received a Best Presentation Award from the Institute of Navigation for his paper entitled "Dilution of Precision Factor in Medium Earth Orbit Search and Rescue Systems." Mr. Paiement, who was also a presenter at SARSCENE 2008, reported on the results of a project co-funded by the Search and Rescue New Initiatives Fund. ■

## Silvie Montier: an example of devotion and compassion

By Kim Fauteux

Recipient of the National Search and Rescue Secretariat (NSS) *2008 Outstanding Search and Rescue Achievement Award*, Silvie Montier was recognized for the time and energy that she devotes to working with search and rescue (SAR) dogs.

Silvie, whose father was a medical officer in the French army, has always had a dog in the house. This led to her working with SAR dogs, and in 2000, the *Canadian Search and Disaster Dogs Association* (CASDDA) came to life. "We respond to anyone who calls us: families, communities, the police or firefighters. We carry on searches in the countryside, the mountains and in the woods because in Canada, it's easy to get lost," said Silvie.



Silvie and her dog are conducting an area search.

Photo Credit: Silvie Montier

### Work with the CASDDA

In addition to searches in Canada, Silvie has participated in many search missions in a number of countries where disasters have struck, like Algeria, Mexico and Peru. "All missions affect us. There are always terrible things happening, but we make friends everywhere. We meet sensational people all over," explained Silvie, who always insists on working with local people during such missions.

The CASDDA is the only organization in North America that is a member of the *International Rescue Dog Organisation (IRO)*, an umbrella institution for all national associations of rescue dogs. The purpose of these associations is to save people, protect them against injury and preserve the welfare of humans with the help of specially trained dogs. The IRO promotes the exchange of information and training, as well as a single standard, through a number of annual training sessions all over the world.

### Outstanding Search and Rescue Achievement Award

When Silvie received the letter telling her that she had been chosen for the *Outstanding Search and Rescue Achievement Award*, she didn't believe that it really came from the NSS. "I thought it was a joke. I believed that it wasn't possible because we keep a rather low profile. When I realized that it was true, I was very happy. It's encouraging when people appreciate what you do, and it also made my father very happy," said the training co-ordinator.

Silvie added that she is delighted that such an award exists in Canada, since it is not only a great honour for the recipients but also recognition for the dogs, as well as for all Canadians who are involved in SAR. Silvie really enjoyed her experience at the 2008 SARSCENE conference, during which she received her award. In her view, the theme of the confer-

ence – *Strengthening Partnerships* – was excellent. She also mentioned that she would like to see such conferences organized for those involved with dog teams in Canada, to help and get to know one another better.

### Dante

Silvie's faithful working partner is her dog Dante, a three-year-old Belgian Malinois. "Dante is more motivated than the last dog I worked with. We communicate very well together. I get along with all dogs, but my relationship with Dante is more intense. We understand each other without words," Silvie explained. She describes Dante as a dog that is not always easy to handle because he has a lot of energy and can be impatient, but she adds that that makes him an excellent SAR dog because he knows what he wants and will do anything possible to get it.

When asked what kind of advice she could give someone who would like to work with SAR dogs, Silvie explains that not all dogs are cut out for that kind of work. The animal must have plenty of energy, yet be disciplined because of the intensity of searches that are sometimes carried out in areas where there is a considerable amount of noise. SAR dogs must also be obedient

and agile. She advises people who own a dog and who would like to get involved in SAR to contact a canine SAR group and have the animal assessed, because only someone knowledgeable can really evaluate the dog.

### Training

In mid-November, Silvie participated in a training exercise in Northern Bohemia. The trainer for that exercise was an international judge. "I participate in such exercises three or four times a year. I also give training workshops and I take courses, not only for the dogs, but for me too", said Silvie.

Silvie strongly believes that to be able to work at the international level with people and dogs from other countries, you have to be qualified at the same level as the others in canine search. As a training co-ordinator, she takes IRO examinations to that end. "Canada is not yet recognized worldwide in the field of canine search and rescue. On the other hand, it is encouraging because there is always the opportunity for growth. No one is totally excellent or totally bad in all areas of training. If we all work together and help one another, we can reach a very high level," concluded Silvie. ■



# SARSCENE 2008:

## Strengthening partnerships in the SAR community

By Kim Fauteux

*While attending SARSCENE 2008, participants enjoyed the beautiful sights of St. John's.*

*Photo Credit: Kim Fauteux*

The 17<sup>th</sup> edition of the SARSCENE conference, the largest national Search and Rescue (SAR) conference and expo, was held in St. John's, Newfoundland and Labrador, on October 15 to 18, 2008. Over 500 SAR delegates from Canada, the USA, Ireland, the United Kingdom, France, Brazil and New Zealand attended the conference.

The National Search and Rescue Secretariat (NSS), along with Newfoundland and Labrador's Search and Rescue Association and Department of Justice, worked hard as co-hosts to ensure that this year's conference, whose theme was "Strengthening Partnerships", would be engaging and interactive. Over 50 presentations and workshops were offered to participants on topics such as SAR Dogs in International Missions, Successful Partnerships, Alternative Alerting Technologies, COSPAS-SARSAT and Fundraising.

More than 40 exhibitors took part in the SARSCENE Expo, which provided participants with an opportunity to learn about various SAR initiatives, products, and services available to the SAR community. SAR professionals also had the

opportunity to mingle and meet new people during the Welcome Reception on October 15, the Volunteer Appreciation Night on the 16<sup>th</sup> and the organized tour of George Street on the 17<sup>th</sup>.



Anna Gainey, Executive Director of the Gainey Foundation

*Photo Credit: Doug Allen*

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Anna Gainey, Executive Director of the Gainey Foundation.

Photo Credit: Doug Allen

## Plenary Sessions and Presentations

After the opening ceremony on October 15, participants had the opportunity to listen to moving presentations. Anna Gainey, from the Gainey Foundation, addressed the SAR community. The Gainey Foundation was established in memory of Cathy and Laura Gainey, wife and daughter of hockey legend Bob Gainey, after the sudden loss of Laura. Anna Gainey spoke of the ordeal her family went through when her sister Laura was swept off the deck of a tall ship into the Atlantic Ocean in December 2006.

Anna and her family, who are still dealing with the aftermath of the tragedy, were thankful for the help of the SAR community. "For most people, search and rescue is not something that we know much about until we need it, and I think as Canadians, we are very, very fortunate that when we need it, it's there. For us, this was the case. Our family will always be deeply grateful for the efforts that went into the search for my sister", said the Executive Director of the Gainey Foundation.

Another powerful message was delivered by Larry and Jacquie Beveridge when they recounted the loss of their nine year-old son Jimmy, who got lost during a family



Jacquie and Larry Beveridge

Photo Credit: Doug Allen

camping trip in 1981. They also talked about the Hug-a-Tree and Survive program. This program, which the Beveridges have been involved with for many years, teaches children between the ages of 5-12 basic survival skills in case they get lost in the woods.

Ron Foxcroft, of Fox 40 International, also gave a presentation on how the famous Fox 40 pealless whistle was invented, and about its use by SAR professionals around the world. The plenary closed with an inspiring story of survival, a video documentary about the story of Lucie Harris, who in 1936, was lost in the woods and was able to

survive an amazing 11 nights and 10 days in frigid weather. Lucy was invited to attend SARSCENE 2008 as it was the tenth anniversary of the release of the documentary outlining her miraculous survival.

## SARSCENE Games

On October 15, in Rotary Sunshine Park, 12 teams competed in a friendly competition called the SARSCENE Games. The one-day event consisted of a series of six SAR-related challenges that demanded cooperation, knowledge and quick-thinking by teams of four people.



The 2008 SARSCENE Games were held at the Rotary Sunshine Park.

Photo Credit: Kim Fauteux

The events, including survival skills and evidence search, featured core skills, such as line-heaving accuracy, first aid and emergency scene management, clue detection and evidence handling, as well as teamwork.

During the Welcome Reception, held on the evening of October 15, the top three teams were awarded medals, and the overall winning team saw its name inscribed on the William Slaughter Cup, and received a commemorative plaque. The Irish Coast Guard took in third place, while the *Sûreté du Québec* finished second. The Avalon North Wolverines of Newfoundland and Labrador had the honour of being declared champions of the 2008 SARSCENE Games.

The next morning, at 5 a.m., the Wolverines were called out to an actual search and rescue to Green's Harbour, Trinity Bay. A 53 year-old man had become separated from his hunting partners the



*A team is showing its first aid skills at the Games.*

*Photo Credit: Kim Fauteux*

day before, and a search was launched by RCPM helicopter, police service dogs and the Wolverines. The Irish Coast Guard went along to lend a helping hand to their friends. The man was found unharmed at about 11 a.m.

On October 16, SARSCENE participants were able to participate in a town hall discussion, which exam-

ined distress alerting in the 21<sup>st</sup> century. Participants had the opportunity to ask questions of experts on this issue, as well as share their own experiences and opinions about distress alerting, emergency beacons and emerging technologies.

Two SAR demonstrations were held on October 15 and 18. The people that gathered at the lake had the opportunity to see first-hand rescue procedures from aircrews, and fast rescue craft and hovercraft. A "victim" was also located, treated and transferred from cliffs to a rescue craft below, to a larger vessel, and finally air lifted by helicopter. Personnel from the Canadian Coast Guard and Auxiliary, CASARA, Newfoundland and Labrador Ground Search and Rescue, St. John's Regional Fire Department and Department of National Defence were available to answer questions and had equipment on display.



*A rescue specialist is being lowered to the water to "rescue a victim" during the SAR demonstration.*

*Photo Credit: Doug Allen*

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Two SAR demonstrations were held on October 15 and 18. The people that gathered at the lake had the opportunity to see first-hand rescue procedures from aircrews, and fast rescue craft and hovercraft. A "victim" was also located, treated and transferred from cliffs to a rescue craft below, to a larger vessel, and finally air lifted by helicopter. Personnel from the Canadian Coast Guard and Auxiliary, CASARA, Newfoundland and Labrador Ground Search and Rescue, St. John's Regional Fire Department and Department of National Defence were available to answer questions and had equipment on display.



*A rescue specialist is being lowered to the water to "rescue a victim" during the SAR demonstration.*

*Photo Credit: Doug Allen*



## 2008 SAR Awards

The 2008 SAR Awards Banquet was held on the evening of October 18. Seven people/groups received Certificates of Achievement for their work and dedication to SAR. The recipients of the certificates were the CCGA – Pacific Unit 14 Gibsons (William Parsons, Marcel Van Der Stelt, Adrian White and Elaine James), Whitney Numan, Al Ekholm, Darren Buck, Bob Smith, Roland Hanel and the Unified Command Exercise Working Group (Lori-Anne Duffy, John Drake, Paul Olshefsky, Scott Stevenson, Roger Steadman, Michel Villeneuve and Barry Folland).

The 2008 NSS Outstanding SAR Achievement Award was presented to Silvie Montier, for her work in the SAR community with her dog Dante. Over the years, Silvie and Dante travelled to many places, including Algeria, Mexico, Haiti and Peru, to lend a hand to those in crisis.

Géraldine Underdown, Executive Director of the NSS, was very pleased with the 2008 SARSCENE conference. "In my view, we will all be able to look back on SARSCENE 2008 as an unqualified success. The conference's theme – Strengthening Partnerships – began a transformation to solid action over the course of the week, as we continued to learn from each other, which will make our search and rescue system, which is already world class, even better!" ■

SAR demonstration on the water.

**Photo Credit:** Doug Allen



From left to right, Bob Smith, Al Ekholm, William Parsons, Whitney Numan, Darren Buck, Silvie Montier, Géraldine Underdown, NSS Executive Director, Roger Steadman, Michel Villeneuve, Lori-Anne Duffy, Paul Olshefsky and Roland Hanel.

**Photo Credit:** Doug Allen

# National SAREX 2008

## An exciting week in Thunder Bay

By Kim Fauteux



A Buffalo Search and Rescue aircraft.

Photo Credit: Kim Fauteux

Here I was, two months into my new job at the National Search and Rescue Secretariat, and about to embark on a new adventure...as a passenger on a Buffalo aircraft. Very exciting most of you will think, and with reason, but also nerve-racking for someone who is terribly afraid of heights, and isn't too fond of flying!

For the first time, I attended the 2008 National Search and Rescue Exercise (SAREX), which was held in Thunder Bay from September 22 to 28, 2008. As a spectator, I had the opportunity to see more than 250 military and civilian search and rescue (SAR) experts from Canada and the United States do what they do best: practice and hone their SAR skills in order to save lives.

The exercise, hosted on a rotating basis by one of the Canadian Forces SAR Wings, gives the SAR community a chance to develop rescue cooperation, test alerting and notification systems, and cross-train in rescue procedures and techniques in the event of a large-scale SAR operation. It also gave me an insight about what really goes on in the SAR world, on a day-to-day basis and presented a wonderful opportunity for me to meet the people working in the field. The exercise, which aimed to improve interoperability, brought together Canadian and American SAR participants for the first time since the mid-1980s.

### Events

This year, the SAR community had the opportunity to compete in the following eight events: Para Accuracy, Search, Rescue, Helicopter Accuracy, Marine Fixed Wing, Marine Helo, Medical and Maintenance. Hosted by 17 Wing Winnipeg's 435 Transport and Rescue Squadron, this year's theme was "The Canadian Frontier". A trophy at the National SAREX is traditionally awarded for team spirit, and historically, theme participation has always played a big role towards selecting the winner. Having been there for various events, and at social gatherings, I can honestly say that the SAR community does not lack team spirit!

The closed-circuit live broadcast of the medical event from inside the "crashed aircraft" fuselage was an innovation, as was the variety of locations chosen for the events (Lakehead University confined area jump, bundle drops at Kakabeka Falls aerodrome, Lake Superior marine and the special public event and parajumps into the Fort William Historic Site). The variety of locations gave participants and onlookers the opportunity to enjoy the beautiful sights of Thunder Bay.



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SAR demonstration on the water

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SAR Techs jumping during the parachuting accuracy event.

Photo Credit: Kim Fauteux

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The Civil Air Search and Rescue Association (CASARA) and its members enjoyed being part of this year's SAREX. "CASARA crews participated in SAREX searching in the same area and looking for the same targets as the military. Military SAR crews were always willing to accommodate and assist CASARA in any way", shared John Kelly, National Administrator for CASARA, who helped organize the event. He also mentioned that CASARA members learned a lot about how to conduct the different phases of SAR and that they would take the information learned back with them to their province/territory and pass it on to their members during CASARA training sessions.

### Trophy Winners

Many trophies were awarded at the Awards Banquet on September 27. The *Team Spirit Award* was awarded to 442 Squadron, Comox, while Warrant Officer Norm Boutin received the *Bell Ringer Trophy*, awarded to the winner of the over-45 age group jump event. MCpl Guy St-Denis was honoured by being awarded the *Complete Parachute*

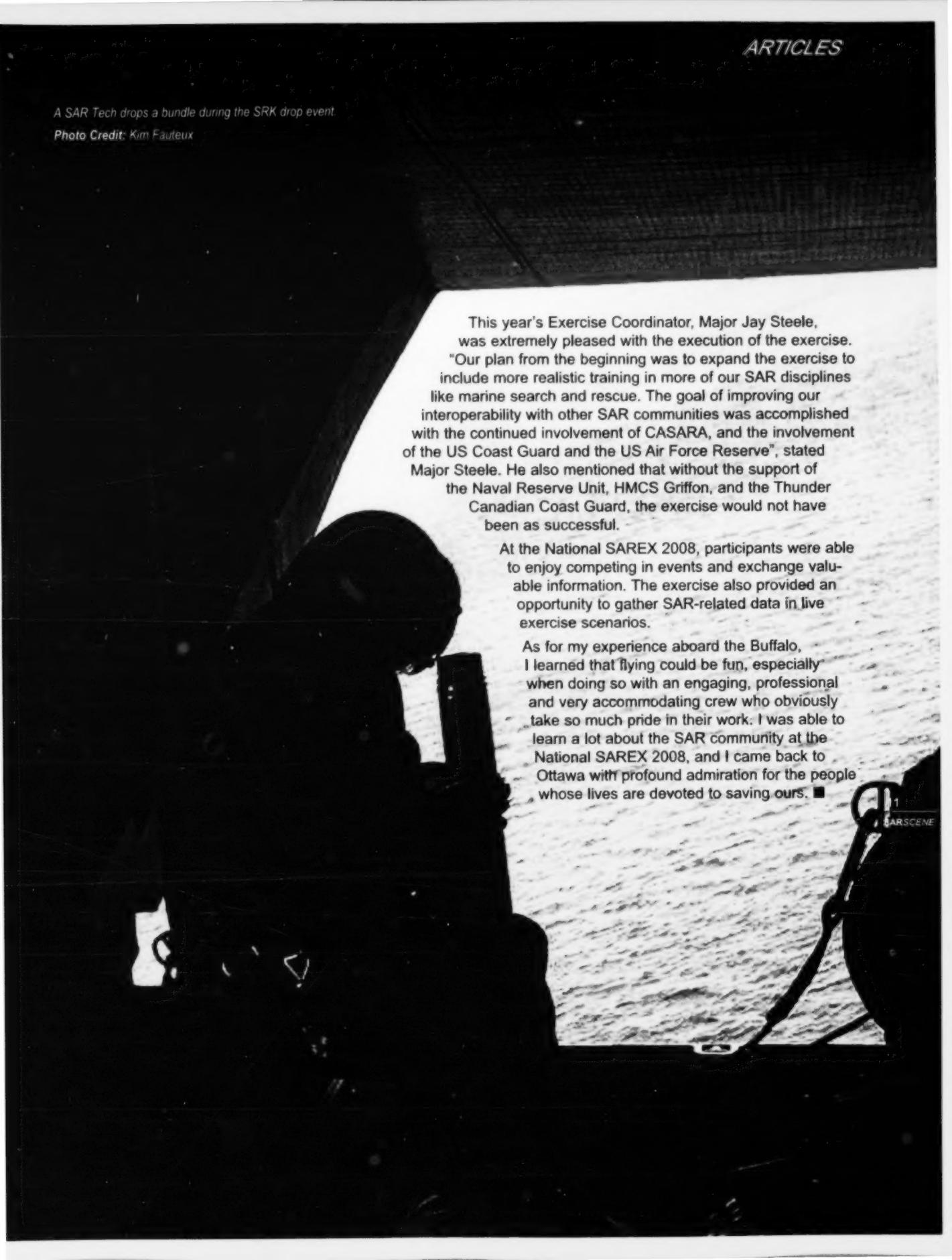
*Solutions Trophy*, for the individual with the best performance in the parachuting accuracy event.

The *Rotary Wing Marine Trophy*, for the best ship hoist sequence, went to 103 Squadron, Gander, while Sgt Shawn Harrison received the *SAR*

*Tech of the Year Award*. The *LCol Colin Goodman National SAR Excellence Award*, for the CASARA crew who demonstrated the best performance in the search event, was awarded to CASARA Thunder Bay.

This year, three squadrons walked away with three trophies each. 424 Squadron, Trenton, received the *Fixed Wing Marine Trophy* for the best SRK drop, the *Rotary Wing Accuracy Trophy* for the most accurate rotary wing flying and the *Cormorant Trophy*, presented to the Canadian civilian, government or military helicopter crew that has performed the most demanding helicopter rescue of the year. 413 Squadron, Greenwood, won the *Allison Trophy* for the best performance in the parachuting accuracy event, the *Fixed Wing Landing Accuracy Trophy* and the *Pararescue Association Honour Roll Trophy*. 435 Squadron, Winnipeg, was awarded the *Maintenance Trophy*, the *Search Trophy*, as well as the *Diamond Trophy*, for the unit with the best overall performance in selected competitive events.



A black and white photograph showing a person in a dark suit and helmet, identified as a SAR Tech, in mid-air. They are holding a bundle and appear to be performing a precision drop. The background is a bright, overexposed sky.

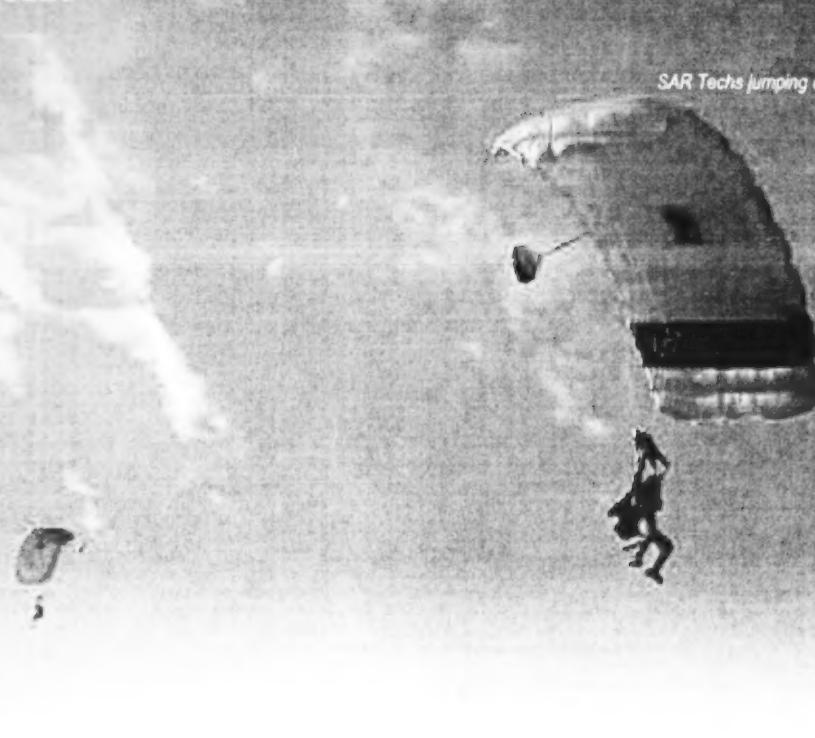
A SAR Tech drops a bundle during the SRK drop event.

Photo Credit: Kim Fauteux

This year's Exercise Coordinator, Major Jay Steele, was extremely pleased with the execution of the exercise. "Our plan from the beginning was to expand the exercise to include more realistic training in more of our SAR disciplines like marine search and rescue. The goal of improving our interoperability with other SAR communities was accomplished with the continued involvement of CASARA, and the involvement of the US Coast Guard and the US Air Force Reserve", stated Major Steele. He also mentioned that without the support of the Naval Reserve Unit, HMCS Griffon, and the Thunder Canadian Coast Guard, the exercise would not have been as successful.

At the National SAREX 2008, participants were able to enjoy competing in events and exchange valuable information. The exercise also provided an opportunity to gather SAR-related data in live exercise scenarios.

As for my experience aboard the Buffalo, I learned that flying could be fun, especially when doing so with an engaging, professional and very accommodating crew who obviously take so much pride in their work. I was able to learn a lot about the SAR community at the National SAREX 2008, and I came back to Ottawa with profound admiration for the people whose lives are devoted to saving ours. ■



SAR Techs jumping during the parachuting accuracy event.

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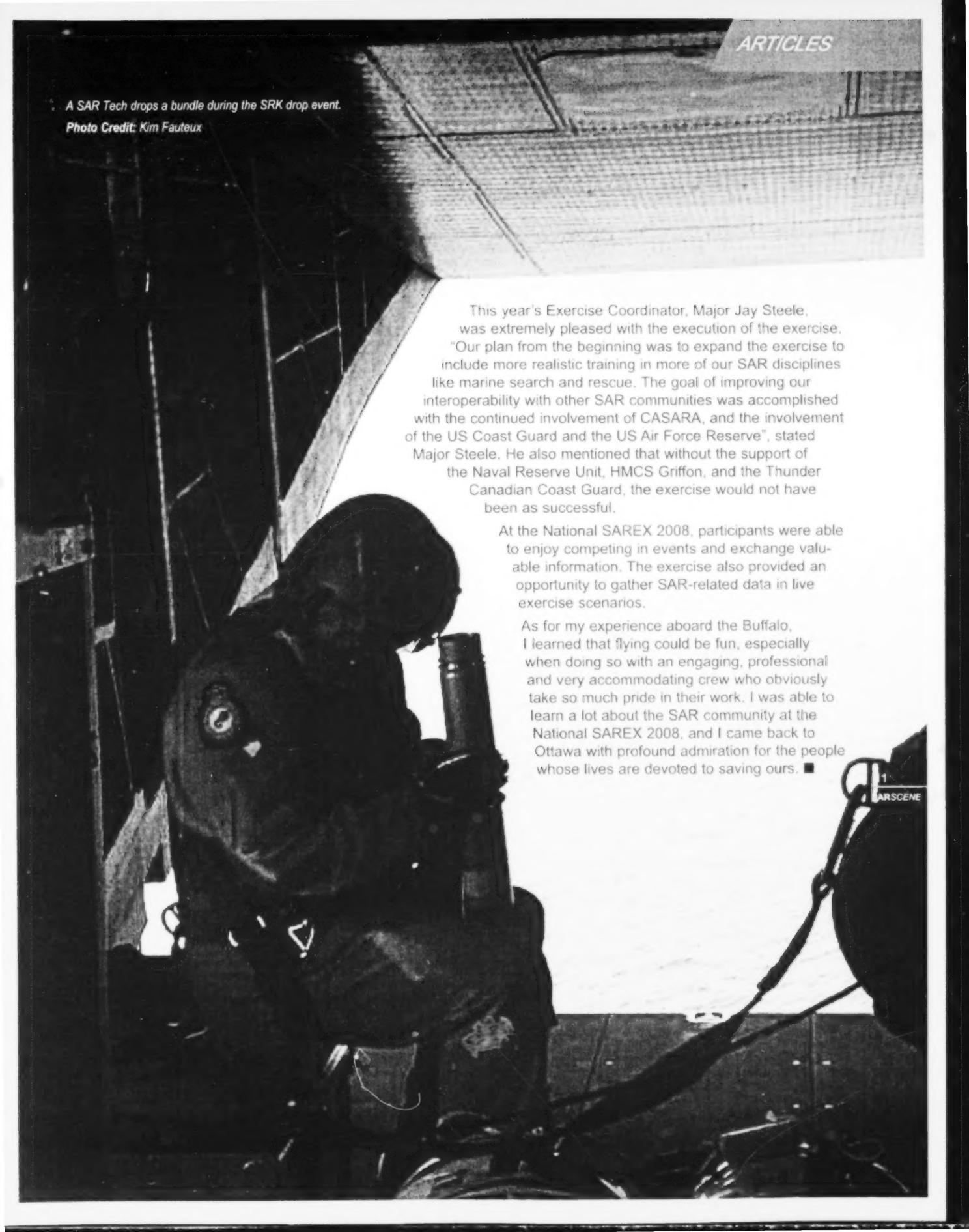
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A SAR Tech is landing during the parachuting accuracy event.

Photo Credit: Kim Fauteux

A black and white photograph showing a person in a dark flight suit and helmet, identified as a SAR Tech, performing a skydive. They are holding onto a bundle of equipment. The background is the dark sky and the interior of a aircraft. The image is grainy and has a high-contrast, journalistic feel.

A SAR Tech drops a bundle during the SRK drop event.

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# The OPP and GBVSAR Join The Cast of *Survive This!*

By Stephane Bachand

**Last September, the Ontario Provincial Police (OPP) and the Georgian Bay Volunteer Search and Rescue (GBVSAR) joined the set of *Survive This!* (formerly known as *Survivorman: Kids*) for the filming of the finale episode. *Survive This!* is a new adventure reality show produced by 9 Story Entertainment Inc. with Les Stroud, a.k.a. "Survivorman." The final episode, which will air in 2009 on YTV, involves four different search and rescue (SAR) missions and includes a search team from GBVSAR and the OPP's K9, marine and air units.**



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## Survive This!

The new show, conceived by the producers of *Survivorman*, filmed eight teens who were sent into the wild without their Internet, televisions or cellular phones, to participate in a number of different survival scenarios. Each teen attended survival school and expert survival instructors were on hand to teach the skills they would need to survive a variation of situations. Each scenario, filmed in a number of locations across Northern

Ontario, involved progressively more challenging circumstances that tested participants in group and individual survival.

The aim of a show like the *Survivorman* series is to provide viewers with the necessary skills to explore and survive outdoors. In order to keep the show as realistic as possible, the teens were placed in situations in which they had to survive on their own with no outside support. The teens had to rely on their own skills and the on-hand

resources to survive, while the film crews filmed their progress from a distance. The producers wanted to end the show with a scenario that involved SAR. To help orchestrate the finale, the producers called the National Search and Rescue Secretariat (NSS) for assistance. In their request to the NSS for participation and support, Jeff Trasher, Challenge Producer for the show, said "We feel that this is a great opportunity for exposure of search and rescue and to help educate the

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OPP and GBVSAR mobile command post

Photo Credit: Pat Dizavaro

public, specifically teens and children, on what to do in worst case scenario incidents for survival, and to give SAR units the best chance of finding them safely." For its part, the NSS asked the OPP if they could provide guidance related to the filming. Members of the OPP worked with the producers to refine the scripts so they would reflect the realities of how the OPP and SAR volunteers are called out to search for a missing person, and how actual searches are conducted.

### Finale

For the filming of the finale, the OPP and members of GBVSAR participated in four different searches at the Leslie Frost Centre in Halliburton, Ontario. The OPP's K9, marine and air units, as well as the GBVSAR, each had to search for a missing teen. The filming was done in one day and presented the points of view of both searchers and missing teens. Starting from the OPP's command post location, filming included the OPP and GBVSAR's arrival on scene, equipment and radio checks, the issuing of maps, each search team's briefing on the available information related to their missing teens, and the search plan.

The GBVSAR search team included Darren Buck, Scott Tuck, Drew Hutchings and Chris Schonberg. The team was tasked to search for a missing 16 year-old girl who had been reported as "not returned

home" for an extended period of time. The search team set out on foot, followed by a camera crew, to look for her. Hiking through rough terrain and swamps, they arrived at an island in the middle of a swamp - the area where the teen was expected to be. The girl answered their calls and indicated that she was okay.

She was told to stay put so that they could perform a medical check to ensure she was not injured, before she tried to walk out with them. To make the trip a little

easier, they gathered some logs to bridge part of the swampy area so that she did not have to go - as Darren Buck put it - "swamp swimming" in the waist deep water in order to reach dryer land. These search efforts lead to another successful rescue.

It is hoped that the participation of both the OPP and GBVSAR in this project will help Canadians gain better understanding of the process and time involved in launching a missing person search. ■



Left to Right, Chris Schonberg, Darren Buck, Jen Duab, Drew Hutchings and Scott Tuck.

Photo Credit: Darren Buck

# Critical incident stress management: A peer-based model in B.C.

By Whitney Numan  
BCSARA CISMP

In January 2007, a two-year process of developing a volunteer peer-based critical incident stress management (CISM) program for search and rescue (SAR) volunteers in British Columbia (B.C.) became fully operational. For a number of years, a few SAR volunteers who were active in other peer-based CISM programs or had training in CISM recognized that SAR volunteers were just as vulnerable to critical incident stress as other emergency responders, such as police, fire fighters and paramedics.

There are approximately 2500 trained SAR volunteers in British Columbia who respond to over 1,000 calls per year. Around 25 percent of these calls involve medical rescues. These rescues are usually compounded by difficult terrain and other conditions that place additional stress on rescuers. In the last fiscal year ending March 30, 2008, 69 subjects were found deceased and 57 subjects had not been found. This is in keeping with statistical averages for the past five years of 66 found deceased and 53 never found. In both circumstances, either body recoveries or not finding a subject add another dimension of stress on volunteers. There are currently 88 SAR teams across the province that provide this vital service on behalf of the province and the tasking agencies, which include local police authorities for missing persons, the B.C. Ambulance Service for medical rescues and the B.C. Coroner Service for body recovery.

## Volunteers willing to talk to other volunteers

One may ask why we decided to instate a peer-based model. We chose to take this approach because it simply works and SAR volunteers are willing to participate in the program. As mentioned above, SAR volunteers are generally regarded as emergency responders like others and in very general terms, these volunteers could be regarded as "type A" personalities – they are strong and have a desire to help others in times of trouble or in an emergency situation. Those individuals are not likely to seek professional help on their own as they believe that it could be seen as a weakness. However, they are more willing to sit down with a group of their peers and talk about things, and this is the format that seems to work best. It is a safe place because they are with their co-workers and others who talk their talk and walk their

walk – a reality that few mental health professionals (MHP) can offer.

Depending on the nature of the critical incident and the type of intervention selected, a MHP may be asked by SAR peers to participate or facilitate the intervention. CISM peers are trained based on very specific protocols to which they must adhere – just like first aid or CPR. They must follow these protocols strictly and may not deviate from them unless there is a MHP providing direction in the intervention. These interventions provide SAR volunteers with "psychological first aid" and peers are trained to recognize whether a higher level of care might be needed and to refer those individuals to that higher level of care. As a result of providing peer based interventions, experience has shown that volunteers are now receiving needed professional help. Otherwise, they may not have gone in that direction without their involvement in the intervention and following the advice of a CISM peer.

## The program

Our program strictly follows and adheres to internationally accepted protocols established by the International Critical Incident Stress Foundation (<http://www.icisf.org>). We currently have 20 active peers around the province who have been trained based on these protocols and who get together twice a year for additional training and practice. The program also has a steering committee, which along with the Program Coordinator makes day-to-day decisions on the program. Conference calls allow the steering committee to meet once a month, and all the peers every second month. We also have a Clinical Director who is a MHP and who provides peers with someone to talk to about an incident or an intervention that may have affected them. Peers themselves can be vicariously traumatized while leading or participation in an intervention due to the graphic nature of the events.

The Provincial Emergency Program supports the program by covering all intervention costs when there is a request for our services. The British Columbia Search and Rescue Association provides funding and support for peer training, as well as the funds associated with the costs of delivering education and awareness sessions to SAR volunteers. The peers are very appreciative of this support, as are the volunteers who have benefited from our services.



The BCSARA Critical Incident Stress Management team.

Photo Credit: Whitney Numan

## Key services

We provide three key services for the SAR volunteers in B.C.: education and awareness, critical incident stress management interventions, and post-incident follow-up. Our goal as it relates to education and awareness is to provide all SAR volunteers with key information about critical incident stress and how to manage it, at least once every three years. Knowing what critical incident stress is and how it can be managed is like getting a flu shot; while there are no guarantees that one will not get the flu after an inoculation, it does increase your resistance to certain flu strains. In the same way, we hope to reduce the impact of these traumatic events on volunteers through knowledge, but more importantly, for them to realize that the stress responses they may be experiencing are normal reactions and that there is help available. That help takes place through a suite of interventions that are available through the program.

We stress that these interventions are an organized approach to the management of stress responses for people with normal reactions to an abnormal event. This process is designed to reduce impact and accelerate recovery. The most commonly used interventions include one-on-one support, small group defusing, and small or larger group debriefings. The final aspect is a follow-up with those involved to ensure that the stress reactions that they may have been experiencing have subsided, or are subsiding. If they are not, we encourage them to see a MHP for a higher level of care.

## Confidential program

Another very important and key aspect of the program is confidentiality. Information is held in total confidence, no names of individuals or conversations are ever recorded in any form, and interventions are not allowed to become operational critiques; they are a process to provide support following a critical incident.

Any SAR volunteer in B.C. may access the program by calling the Emergency Coordination Centre and request that one of the peers contact them. As our program becomes more active with education and awareness sessions exposing SAR volunteers to CISM, and as word of mouth spreads following successful interventions, our program is responding to more calls. This past summer, our program was activated 11 times in July and August. We have experienced a drop in calls in September, which has made it possible for us to handle the volume of calls. In order to address some recent resignations due to other personal matters, we will be recruiting in the new year.

For more information on the program, please feel free to e-mail ([w2num@bulkley.net](mailto:w2num@bulkley.net)) or call Whitney Numan, program coordinator at 250-847-9805. ■

*Whitney Numan helped develop the Critical Incident Stress Management program in B.C., has been a search and rescue volunteer since 1989, and a SAR manager since 1991.*

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# SWITCH TO 406

The Switch to 406 MHz ELT technology has sparked debates and has raised many questions. The following are letters to the editor published in The Chronicle Herald, and reproduced with permission. The opinions expressed herewith do not necessarily reflect those of the National Search and Rescue Secretariat, its partners, and the Government of Canada.

## Old technology in new package *Private pilots fear legislation will cost lives*

By Don Ledger

World famous balloonist and private pilot Steve Fossett's wrecked plane was found recently in the Inyo Mountain region of California. Fossett took off from Yerington, Nev., on Sept. 3, 2007. He vanished, sparking a world media response and one of the largest airborne hunts in the history of general aviation. On Oct. 2 of this year, the wreck was discovered by a hiker 200 miles south of the search area. The plane was equipped with the newest model 406 Emergency Locator Transmitter (ELT). It was destroyed in the crash; otherwise, Fossett would likely have been located in hours.

On Aug. 3, 2008, an aircraft carrying seven crashed in British Columbia shortly after taking off. It and the ELT were destroyed by fire. Five perished. A survivor text-messaged a friend, who passed the information along to Search and Rescue (SAR). It took four critical hours.

In two other recent crashes in Canada, the ELT did not activate.

Fast response times are imperative. When survivors need immediate medical attention or might perish due to weather, what good is a piece of equipment that does not signal the location of the crash?

Is there a better way? Yes, but 406 ELT technology is being federally legislated by Transport Canada despite private pilot concerns.

Private pilots in Canada relied upon ELTs to pinpoint their crash locations – activating automatically, using an internal G-switch. A signal is relayed via satellite, identifying the general area of the crash to a Rescue Co-ordination Centre (RCC). SAR aircraft then "home in" on the signal to locate the crash site. Though simple in theory, ELTs did not activate in more than 50 per cent of crashes. Contrarily, they often activated due to a hard landing. Inadvertent triggerings became common.

Pilots put up with ELT expense and upkeep because they were "the only game in town."

ELTs are failure-prone in many ways. If the aircraft crashes into water, the signal is lost. If the aircraft impacted in an inverted position, the top-mounted antenna could be destroyed, buried in the ground or blocked by the plane's metal fuselage, deep ravines or mountain valleys; the Earth's curvature past 70 degrees north latitude prevents the satellite from receiving the signal.

Wreck sites are located using trained military or civilian spotters in airplanes. But they have to know where to look first. Sometimes the plane, pilot and passengers are never found.

Despite good arguments against, Transport Canada decided to support only 406 ELT technology. The Canadian Owners and Pilots Association (COPA) – the largest association of private pilots in Canada, representing about 18,000 of some 35,000 to 40,000 such pilots – has been fighting this implementation for years. Transport Canada agreed to step back some years ago, but changed its mind recently due to the refusal of the Canadian air force to support anything but 406 ELTs. Transport Minister Lawrence Cannon refused to meet with Kevin Psutka, COPA president and CEO.

The new ELTs are expensive, and will cost some pilots the loss of their airplanes. But the real cost will be lives lost due to the failure of this old technology. ELTs will fail as they did before. Pilots and passengers will be left, perhaps injured or dead, and they will not be found. Some of the stories of what occurs when this has happened are heart-rending. Families and loved ones will have no closure.

The new 406 ELT technology is not supported by the American Owners and Pilots Association and some 600,000 private pilots in the U.S. It will not be enforced by the Federal Aviation Agency.

There is OnStar-type technology called SPOT available now for use in airplanes. It tracks a GPS unit in the aircraft and updates the location of the plane every 10 minutes, right down to one-third of a square metre. If the GPS is destroyed, its last known position is recorded by the satellite and transmitted to the user's home computer or some other responsible agency, including SPOT itself. Search and Rescue flies to that last known position; the old ELT – if needed – can then be used to locate the wreck and hopefully survivors.

Perhaps the most egregious parts of this legislation are the specifications that mean alternate technology must meet requirements that even Transport Canada's proposed 406 ELT cannot meet.

There will come a day when the families of lost pilots or passengers will discover there was a better way to find downed airplanes, that this was a survivable accident but the survivors perished over time due to weather or injuries and a non-functioning ELT. Transport Canada and the government of Canada will be on the hook for a large lawsuit, with many more to follow. And in aviation, the cash awards are always large.

Thirty years ago in the United States, a Cessna crashed upon take-off in Florida due to a faulty seat rail. The pilot, a doctor, perished in the crash, after his seat slid back during the take-off. The family sued Cessna Aircraft and won a \$25-million settlement – for a faulty seat rail.

That can and will happen in Canada. Transport Canada needs to halt this legislation.

Don Ledger is a writer, private pilot and former Zone Commander for Halifax District Civil Air Search and Rescue.

## The switch to 406: Let's get the right signals

By Carole Smith

An Oct. 23 opinion piece by Don Ledger, decrying the proposed legislation of 406 MHz Emergency Locator Transmitters (ELTs) for aircraft, demands a response to ensure the Canadian public has a more balanced and objective view of this issue.

ELTs transmitting on 121.5 and 243 MHz were first developed in the 1950s to help locate military aircraft, and were later mandated for civilian use. In the early 1980s, satellite technology was harnessed to detect and locate these ELT signals, automatically relaying them to authorities even before an aircraft may have been reported overdue. By the mid-1990s, the humanitarian COSPAS-SARSAT satellite system was providing search and rescue alerting to over half a million aviation, maritime and land-based users around the globe. ELT technology had also advanced, with more accurate and reliable digital models operating on 406 MHz.

Recognizing the lifesaving advantages of this new technology, the International Civil Aviation Organization, among others, urged COSPAS-SARSAT to invest fully in the 406 MHz system. In October 2000, a decision was made to end satellite surveillance of 121.5 and 243 MHz signals on Feb. 1, 2009.

Are 406 MHz ELTs simply "old technology in a new package," as Mr. Ledger asserts? No. Their digital signals are 50 times stronger than the old analog ELTs. They work with the geostationary satellites that detect alerts almost immediately, as well as the low Earth-orbiting satellites that cross over the poles and compensate for terrain effects. Mr. Ledger's concern about limited coverage north of 70 degrees is therefore unfounded. And, unlike the anonymous 121.5 MHz ELTs, a properly registered 406 MHz ELT is matched to a specific aircraft, allowing a distress alert to be investigated even while the aircraft's final position is calculated.

Do ELTs save lives? Yes. Ask the family of Kate Williams. This three-year-old toddler was the only survivor of a plane crash that killed her grandfather and his business partner near Golden, B.C., in October 2007. When the aircraft crashed into a mountain stream soon after take-off, the ELT activated automatically, alerting the search and rescue system and guiding rescuers to the snowy crash site just before nightfall.

Do ELTs work 100 per cent of the time? No, but neither do smoke detectors, airbags, seatbelts or any other safety device. According to the U.S.-based Aircraft Owners and Pilots Association, 406 MHz ELTs activate 81 to 83 per cent of the time, a considerable improvement over the 25 to 73 per cent activation rates of earlier generations. As Mr. Ledger mentions, some promising alternative technologies are emerging, but to date, no single unit is designed specifically for aviation use, has an automatic crash sensor, and is capable of providing an initial location within five kilometres. Nothing, however, is stopping pilots from utilizing these alternatives as a backup.

Are 406 MHz ELTs accessible only to the rich? A compact 406 MHz ELT for a general aviation airplane costs around \$1,000, plus up to seven to 10 hours of labour to install if the airplane isn't already wired for a cockpit switch. While pricier than the older ELTs, expenditures in this range shouldn't be unfamiliar to aircraft owners. And, unlike the alternatives being marketed, there are no annual subscription fees for COSPAS-SARSAT service.

Mr. Ledger also makes a surprising claim that U.S. adventurer Steve Fossett was flying an aircraft equipped with a 406 MHz ELT. The investigation is ongoing, but preliminary information indicates that no 406 MHz ELT was on board, nor is there any record of one being registered to the plane.

Is Transport Canada wrong to mandate today's best available search and rescue alerting technology? If Canada's 24,000-plus civil aviation aircraft are not upgraded with 406 MHz ELTs, search and rescue alerting will effectively return to the pre-1980s era, once satellite processing of 121.5 and 243 MHz comes to an end next February.

Here's a suggestion for aircraft owners and pilots: Don't be satisfied with a single source of information on this important issue. Do your own research, including informing yourself about 406 MHz technology by visiting websites like COSPAS-SARSAT ([www.cospas-sarsat.org](http://www.cospas-sarsat.org)) and the National Search and Rescue Secretariat ([www.nss.gc.ca](http://www.nss.gc.ca)). Above all, please think very carefully before you turn your fellow aviators – and their passengers, friends and families – against this life-saving technology.

Carole Smith is the "Switch to 406" project co-ordinator with the National Search and Rescue Secretariat. She's also a private pilot, and a former unit director/zone commander with the Civil Air Search and Rescue Association in Ontario.



Different beacon types.

# The ongoing transition to 406 MHz beacons

By Daniel Levesque

COSPAS-SARSAT

The world-wide decision to terminate COSPAS-SARSAT satellite processing of 121.5 MHz and 243 MHz signals as of February 1, 2009, was taken after much debate nine years ago, following a request by the International Maritime Organization (IMO) and coordination with the International Civil Aviation Organization (ICAO). The COSPAS-SARSAT Council is well aware of the impact of this decision on users, particularly those who may not have switched to the 406 MHz frequency at this time. However, from a satellite system management perspective, international changes of this magnitude require long-term planning and careful coordination prior to implementation. There are no viable options for turning back from the global decision made in 2000.

Over the past several years, the COSPAS-SARSAT Council has continuously advertised the need for beacon owners to switch to 406 MHz and encouraged the development of lower-cost 406 MHz beacons. Beacon prices have been steadily decreasing as new models became available and the number of 406 MHz beacons is rapidly growing (+21% in 2007). Many administrations developed plans to prepare for the transition, in accordance with the international regulations issued by IMO and ICAO. However, national regulations for ships and aircraft not under the ICAO or IMO conventions' jurisdictions are quite diverse and reflect a far from uniform approach to the transition, as illustrated below.

The carriage of 406 MHz emergency positioning indicator radio beacons (EPIRBs) is a requirement of the IMO Global Maritime Distress and

Safety System for all vessels operating under the Safety of Life at Sea Convention. For commercial aviation, 406 MHz automatic-fixed emergency locator transmitters (ELTs) have been a mandatory requirement for new aircraft since 2002, but the ICAO regulation revised in 2007 allows carriage of non-automatic 406 MHz ELTs on older aircraft. A discussion of the advantages and drawbacks of fixed-automatic ELTs versus "survival" ELTs or personal locator beacons (PLBs) published in the Information Bulletin in February 2008 is available on the COSPAS-SARSAT Web site at <http://www.cospas-sarsat.org/Documents/informationBulletin.htm>.

## Transition to 406 in other countries

In the USA, manufacturing, sale or import of 121.5/243 MHz EPIRBs was banned in 2003 and their operation at sea has been illegal since 2007. No regulation has been issued by the US Administration concerning the carriage of ELTs on general aviation aircraft; therefore, 406 MHz ELTs are not currently a requirement for small aircraft in the USA.

In most countries, 406 MHz EPIRBs are now standard safety equipment for the merchant marine, as well as the fishing industry and sailing/pleasure craft navigating beyond coastal waters. For example, Australia and New Zealand both had former regulations requiring carriage of 121.5 MHz EPIRBs. The carrying of 406 MHz EPIRBs is now mandated for all ships navigating beyond coastal waters and both countries also made the carriage of 406 MHz ELTs mandatory onboard general aviation aircraft. A very

active registration campaign for 406 MHz beacons is underway with more than 4,000 beacons being registered each month in Australia alone.

New regulations for the carriage of 406 MHz EPIRBs, ELTs or PLBs have been issued in many European countries in accordance with the applicable "European directives". In France, the carriage of 406 MHz EPIRBs has been mandatory since 1996 for cargo and passenger ships and for most fishing vessels since 1999. In accordance with ICAO recommendations, 406 MHz automatic ELTs are mandatory equipment for commercial aircraft. For light, general aviation aircraft, an ELT or a PLB operating on 406 MHz is required.

These examples show that the transition to 406 MHz beacons or other means of distress alerting will continue well beyond the February 1, 2009, deadline. This is a very significant step for the International COSPAS-SARSAT Programme, 27 years after the 1982 launch of the first satellite. It opens up the path to another transition, i.e. the future introduction of the Medium-altitude Earth Orbiting Satellite System for Search and Rescue, or "MEOSAR". This new system will ensure the continuity of the 406 MHz satellite alerting service for many decades to come and provide new opportunities for service enhancements, to the benefit of all users and administrations worldwide.

■

Daniel Levesque participated in the development of the Sarsat system at the French National Space Center (Centre National d'Etudes Spatiales). Since 1987, he is the Head of the Secretariat of the International COSPAS-SARSAT Programme, which moved from London, UK, to

Montréal, Canada, in 2005.

# Maximizing your Lifeline to survival: The importance of 406 MHz beacon registration

By NSS staff

**W**ould you like to register now, or later?" Anyone who has installed a computer program has seen a message like this pop up on their screen, or they have found one of those little manufacturers' registration cards in the bottom of the box after unpacking a new toaster, camera, or snow blower. Unless a warranty is involved, however, we often tend to ignore or postpone – sometimes indefinitely – this registration process.

Emergency distress beacons that operate on a primary frequency of 406 MHz also come with registration forms. It is critical, however, that these forms not be ignored, postponed, or forgotten. In fact, it is in the owner's best interest to register with the Canadian 406 MHz Beacon Registry (<http://beacons.nss.gc.ca>) immediately, even before their beacon is installed in an aircraft or vessel, or set aside to await its first adventure.

## What's so special about 406 MHz beacons?

### Unique identity

The older generation of emergency beacons that operate on a primary frequency of 121.5 or 243 MHz are analog devices. Their signals are anonymous, and provide no information about the nature of the distress, or indeed, if a distress situation actually exists. The vast majority of 121.5 MHz and 243 MHz alerts received by the search and rescue system are determined to be false alarms, often after precious rescue resources have been sent to investigate.

Thanks to the ability of 406 MHz beacons and the COSPAS-SARSAT system to accept and process digital messages, each 406 MHz emergency beacon can be uniquely identified. If it is properly registered, it can be matched to a particular aircraft, vessel, or individual. Search and rescue (SAR) authorities can then get in touch with the emergency contacts on the registration file. This offers the potential to resolve false alerts with a single telephone call, saving rescue resources for true distress situations. In the case of an actual emergency, reaching the emergency contacts can give the rescue controller important information about an aircraft, vessel, or person in distress, even while the satellite system is calculating its location. An emergency involving a passenger ferry will require more resources to be

dispatched, for example, than an incident involving a sailing vessel crewed by five people.

### Faster locating ability

A properly-registered 406 MHz beacon can make rescue efforts more efficient in other ways, too. If a 406 MHz beacon is equipped to transmit navigational data from a Global Positioning System (GPS), its location will be received almost immediately by COSPAS-SARSAT's geostationary satellites. This certainly takes the "search" out of search and rescue.

However, if a 406 MHz beacon does not have GPS capability, its position is calculated by low-earth orbiting COSPAS-SARSAT satellites passing overhead. The first satellite pass initially generates two positions: the actual or "true" location of the beacon, and one mirror-imaged location, which could be several hundred or several thousand kilometres away. With the older 121.5 MHz beacons, rescue authorities must wait for a second satellite pass to confirm which position is the correct one. However, a properly-registered 406 MHz beacon can help eliminate this ambiguity almost immediately. If, for example, a 406 MHz Emergency Locator Transmitter (ELT) alert is registered to a small aircraft normally based in Sherbrooke, Quebec, rescue efforts can be directed to the coordinates closest to that location, rather than the less likely mirror-imaged position, 1800 km to the southeast in the middle of the Atlantic Ocean. If a 406 MHz beacon is unregistered, time may be lost as rescue authorities wait for the true position to be determined by successive satellite passes.

### Customized SAR information

Finally, a beacon owner has the ability to add any additional information to its record that he/she feels will help a SAR operation. Itinerary information can be a big help. For example, a Personal Locator Beacon (PLB) record might contain the following information: "Moose River, ON: Will be one of four canoes travelling between Moose River Crossing and Moose Factory 17-23 July, 2008."

In one case, a PLB owner included the fact that he was an insulin-dependent diabetic in his beacon registration. When he got into serious trouble in the backcountry and had to use his beacon, the rescue unit dispatched to his location was already aware of his medical history.

### What are the consequences of an unregistered 406 MHz beacon?

An unregistered 406 MHz beacon limits the ability of SAR authorities to investigate and respond to an alert in an efficient and effective manner, because without registration information, rescue authorities won't be able to determine:

- what vessel, aircraft, and/or individual is in distress;
- where the vessel, aircraft, or individual is normally based;
- who the owner is, and how to contact him or her;
- if the alert is a true distress situation, or a false alarm.

Valuable time can be lost, and in the case of a false alert, rescue resources may be launched unnecessarily.

Unfortunately, the number of unregistered 406 MHz beacon alerts currently being received by the Canadian Mission Control Centre in Trenton, Ontario, suggests that up to 40 percent of all 406 MHz beacons being used in Canada are not registered. For aviation and marine beacons, this is a contravention of the *Aeronautics Act*, and the *Canada Shipping Act, 2001*, respectively.

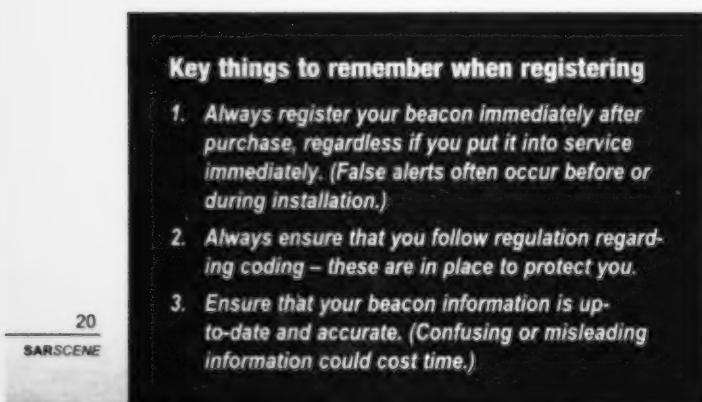
### Key things to remember when registering

1. *Always register your beacon immediately after purchase, regardless if you put it into service immediately. (False alerts often occur before or during installation.)*
2. *Always ensure that you follow regulation regarding coding – these are in place to protect you.*
3. *Ensure that your beacon information is up-to-date and accurate. (Confusing or misleading information could cost time.)*

### What are the consequences of a 406 MHz beacon registration that is incorrect or incomplete?

An incorrect or incomplete beacon registration may also detract from the effectiveness of a SAR response – sometimes in a very serious way. Here are a few examples of the consequences of an incorrect or incomplete registration:

- A ship equipped with an Emergency Position-Indicating Radio Beacon (EPIRB) is repainted with a new blue-and-yellow colour scheme. The owner fails to update the description in the beacon registry, which says that the ship is red and white. When the EPIRB is triggered months later as the ship starts taking on water, rescue units are given the out-of-date description, causing confusion during the search.
- An aircraft is sold to a new owner, but the 406 MHz ELT registration record is not updated. When the aircraft crashes late one evening, time is wasted and potentially valuable information missed as the rescue centre calls the original owner's emergency contacts.
- An EPIRB is taken out of one fishing boat in an owner's fleet and re-installed in another. However, the owner fails to change the vessel's name and information in the beacon registry. When the EPIRB goes off in an emergency, the rescue centre calls looking for the original boat, and is told that it is safely tied up in the harbour. This conflicting information delays the rescue effort for the actual vessel in distress.



**Comparison of core information immediately available to the SAR system, based on beacon type and registration status:**

**121.5 / 243 MHz beacon  
(cannot be registered)**

**Unregistered  
406 MHz beacon**

**Registered  
406 MHz beacon**



(assumed to be an ELT; since  
121.5/243 MHz EPIRBs and  
PLBs are no longer legal in  
Canada)

- Beacon type (ELT, EPIRB, or PLB)
- Country code
- Beacon serial number (EPIRB or PLB) or aircraft identifier (ELT)
- Location information, if GPS equipped

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- Country code
- Beacon serial number (EPIRB or PLB) or aircraft identifier (ELT)
- Location information, if GPS equipped
- Aircraft or vessel type and description (for ELT or EPIRB)
- Owner information including contacts
- Alternate emergency contacts
- Supplementary information (e.g. special itinerary or other notes)

**A few notes on beacon coding**

In addition to properly registering their 406 MHz beacons, Canadians must also ensure that they are buying beacons that are coded for Canada. The coding process is usually carried out by the manufacturer, or a designated service representative.

First and foremost, Canadians should be using beacons that are properly coded because when a beacon alert is first detected by the COSPAS-SARSAT system, it is routed to the country where the beacon is coded, while a final position is being calculated. While alert data is shared very efficiently amongst participating COSPAS-SARSAT countries, it is most efficient if Canadian-based beacon alerts are routed directly to the Canadian

Mission Control Centre in Trenton. Only Canadian-coded beacons can be registered with the Canadian 406 MHz Beacon Registry.

If you find yourself with a USA or foreign-coded beacon, you can return the beacon to the manufacturer or a designated service representative to have it re-coded for Canada. There is a cost associated with this service, usually in the vicinity of \$75 USD, plus shipping and handling. While it is possible to register an American-coded beacon with the US-based 406 MHz Beacon Registry, out-of-country registrations are strongly discouraged for both operational and administrative reasons.

**Is my 406 MHz beacon Canadian?**



The 15-digit identification code or "Hex code" for a Canadian 406 MHz beacon begins with one of the following prefixes:

**278 279 A78 A79**

**The following table summarizes the coding and registration requirements for each type of beacon**

<b>406 MHz beacon type</b>	<b>Coding requirements (completed by manufacturer or representative)</b>	<b>Registration requirements (completed by beacon owner)</b>
<b>Emergency Locator Transmitter (ELT)</b>	Must be coded for Canada, and coded with the aircraft's unique 24-bit International Civil Aviation Organization (ICAO) identifier (issued by Transport Canada, and displayed online at the Canadian Civil Aircraft Register).	Must be registered by the owner (or designate) with the Canadian 406 MHz Beacon Registry. Annual verification of registration data is strongly recommended.
<b>Emergency Position- Indicating Radio Beacon (EPIRB)</b>	No additional customization required, but the beacon should arrive from the manufacturer coded for Canada, and coded with the EPIRB's serial number.	Must be registered by the owner (or designate) with the Canadian 406 MHz Beacon Registry. Annual verification of registration data is strongly recommended.
<b>Personal Locator Beacon (PLBs)*</b>	No additional customization required, but should arrive from the manufacturer coded for Canada, and coded with the PLB's serial number.  * includes ELT-S or EPIRB-S "survival" beacons which are portable, and not necessarily linked to a specific aircraft or vessel.	Must be registered by the owner (or designate) with the Canadian 406 MHz Beacon Registry. Annual verification of registration data is strongly recommended.

### **How to register your 406 MHz emergency beacon:**

There are a number of ways to register a 406 MHz ELT:

- online (24/7) at <http://beacons.nss.gc.ca>
- by faxing toll-free the registration form to 1-877-406-FAX8 (1-877-406-3298)
- by mailing the registration to NSS Beacon Registry, 400-275 Slater St., Ottawa, ON K1A 0K2
- by calling toll-free the NSS Beacon Registrar at 1-877-406-SOS1 (1-877-406-7671) between 08:30-16:30 Eastern
- by e-mailing [beacons@nss.gc.ca](mailto:beacons@nss.gc.ca)

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OPP Helicopter - Orillia Pilot: Sgt. Scott Ross.  
Photo Credit: Darren Buck



# Making the News

## How the Canadian Avalanche Centre works with the media for avalanche safety

By Mary Clayton

Communications Director, Canadian Avalanche Centre

**C**anada is an alpine nation, yet most Canadians have little or no effective knowledge of avalanches. The Canadian Avalanche Centre (CAC) focuses a lot of effort into building cultural awareness of avalanches and avalanche safety strategies. The aim is to broaden the public's awareness of the avalanche phenomena, as well as expand the reach of programs and services. Some of the most effective tools in these efforts are the electronic and print media.

### Reactive mode

To an increasingly urbanized population, conflicts with nature are shocking. Anything shocking or out of the ordinary is newsworthy. When avalanches cause deaths, close highways or isolate communities, media attention is immediate. However, the reporters involved often have no background knowledge of snow or avalanches. The pressure to get the story first may result in information being published or broadcast that could be erroneous or harmful.

In these situations, we are challenged to facilitate the distribution of accurate and timely information relevant to public safety, without fueling the fires of sensationalism. In our role as the "go-to" office for all things related to avalanches in Canada, we have given as many as 30 interviews in one day after particularly newsworthy events. We have learned ways to prepare for these onslaughts and how to ensure that our spokespeople are briefed and ready with the messages that we feel necessary to convey.

It is critical that our role be crystal clear. At the CAC, we speak with authority about snow stability, how avalanches are formed, Canadian avalanche statistics, and all sorts of interesting related topics. However, our focus remains public avalanche safety in the backcountry and our spokespeople know which questions they can answer and which ones need to be deferred to other organizations.

We know that the media's focus is on the newsworthy event. We try to anticipate what questions will be asked so that we are ready with answers that serve our purpose – public avalanche safety. Our spokespeople have had media training and rehearsed interview strategies in order for them to be able to answer reporters' questions while promoting our safety message.

### Proactive mode

The CAC often seeks out the media to cover stories that we have created. The challenges lie in providing newsworthy content that will attract media coverage, and convey our safety messages in a way that resonates with the public, all in a cost-effective manner. It is a tall order, but it is worth the effort.

It is important to remember that "newsworthy" means anything out of the ordinary. To most people, the CAC's work is out of the ordinary, so the organization is a step ahead already. However, snow sliding down a mountain isn't enough – there needs to be a focus, a "hook" that will make a reporter want to tell the story.

We go to the media with a wide variety of stories throughout each winter. Some are vital to public safety, others are more human-interest oriented. All of them start with a press release.

*The CAC works with the media when trying to promote their organization's message.*

*Photo Credit: Canadian Avalanche Centre*



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SARSCENE

Newsrooms are flooded with press releases, so it's important to spend some time on them. Releases should be written like a newspaper article – concise, plain language, and with the most important information at the top. Including a quote from a spokesperson is always a good idea and provides a good opportunity to deliver the message in a colourful and hopefully, memorable way.

The idea is to make the reporters' work easy. The main purpose is to get wide coverage and a lot of interviews. When this occurs, we know that we have done our best to get our prevention message out.

## Lessons Learned

Regardless of whether we are engaging the media on our terms or in reaction to an outside event, there are communication essentials that apply across the board. We have found it best to stick to just a few key messages, usually no more than three. It is important to decide who will be speaking to the media, and who will not. All spokespeople should have had some media training, and should know how to present messages in a systematic manner.

Over the past few years, we have seen a marked rise in the public profile of our organization. Our avalanche forecasters are becoming "regulars" with a number of media outlets, and we feel that we are on the right track in our quest to build avalanche awareness. The time invested in preparing for the media has always paid off.

The media is a tremendously powerful tool. We've made mistakes along the way in our attempts to harness it, and we have learned valuable lessons as well. Our aim is to help Canadians understand and appreciate avalanches as a natural part of the winter environment, intrinsic to many winter activities and generally manageable through informed decisions. The media is helping us achieve that aim. ■

## Before the Interview: Prepare

- Ask yourself: What do I want the headline to say? What do I want the reporter to remember when it's over?
- Prepare bridging phrases in case the reporter steers the interview away from what you feel comfortable discussing. Plan to bring it back by using bridging phrases like 'There is an equally important concern, which is...' or 'Let me just add...'

## During the Interview: Things to Do

- Know what you're going to say ahead of time.
- Know your facts.
- Start off on the right message.
- Take your time, don't feel rushed. Unless it is a live interview, it is perfectly fine to ask to start again if you feel that you can improve your answer.
- Keep your answers brief. Practice responding in 10 to 15 second "sound bites."
- Stick with your key message or answer—even if you feel that you sound like a broken record.
- Be conversational.
- Don't be distracted by your environment—close the door or ask people around you to be quiet.
- Use quotable language.
- Demonstrate the energy that you have about your subject. Be aware of your tone, your body language and your appearance.
- Try to make every question an opportunity to talk about your message points.

## During the Interview: Things to Avoid

- Do not lie.
- Do not use jargon; use clear and plain language.
- There is no "Off the Record" and an interview is never over. Every microphone should be considered live at all times.
- Reporters sometimes go on fishing trips. Don't go for the bait.
- Don't blatantly ignore a critical comment and don't repeat negative words that were used in a question. Turn negatives into positives.
- Do not respond to speculation or hypothetical questions.
- Watch out for "either/or" questions. If you do not like the options, give another answer.
- Beware of hearsay or unsubstantiated comments. Do not respond to things that you have not directly heard.
- Beware of misinformation. Correct it before moving on.
- Don't be intimidated by rapid-fire questions. Take the questions one at a time and respond at a comfortable pace.

# Deadline to Obtain your Pleasure Craft Operator Card: September 2009

By the Operator Competency Program Team

Transport Canada, Marine Safety

Transport Canada would like to remind everyone that after September 15, 2009, anyone operating a motorized pleasure craft must carry a proof of competency on board. The Pleasure Craft Operator Card is probably the most easily identifiable proof of competency. Other acceptable forms include: proof of boating safety training prior to April 1, 1999, or a completed Rental Boat Safety Checklist.

The requirement to carry a proof of competency is nearing the end of the program's ten-year phasing in period. In fact, anyone born after April 1, 1983, is now required to carry proof of competency. Anyone operating a motorized pleasure craft less than four metres (including personal watercraft) is also required to carry proof of competency.

September 15, 2009, marks the date by which all operators of motorized pleasure craft must obtain proof of competency, regardless of their age or length of their vessel.

If you haven't already obtained your Pleasure Craft Operator Card, Transport Canada recommends taking a boating safety course from an accredited course provider. At the end of the course, you will need to pass a knowledge test. A pass mark of 75 percent is required to obtain the card.

While not mandatory, a course is a small investment that has a big payoff in terms of helping you to be more aware of boating safety practices, prevention measures, and practical strategies to reduce risks. Transport Canada has always believed that more knowledgeable

and educated boaters on our waterways will lead to declines in the number of boating-related fatalities and the severity of incidents over the long term.

If you already have your Pleasure Craft Operator Card, remember that boating safety is a lifelong commitment. Make it your priority to keep yourself up to date in the very latest in safe boating information; you can even build on your current knowledge by taking further training. For tips on staying safe on the water, or to find out more about how to obtain your Pleasure Craft Operator Card, please visit [www.boatingsafety.gc.ca](http://www.boatingsafety.gc.ca) or call 1-800-267-6687.

## Update on Safe Boating Guide

Transport Canada's Office of Boating Safety will issue a new edition of the *Safe Boating Guide* in 2009 to reflect amendments to the Small Vessel Regulations expected to come into force in 2009. The guide has been redesigned and re-written and will feature some new information, including an expanded section on protecting the marine environment. For more information on the Office of Boating Safety, please visit [www.boatingsafety.gc.ca](http://www.boatingsafety.gc.ca).

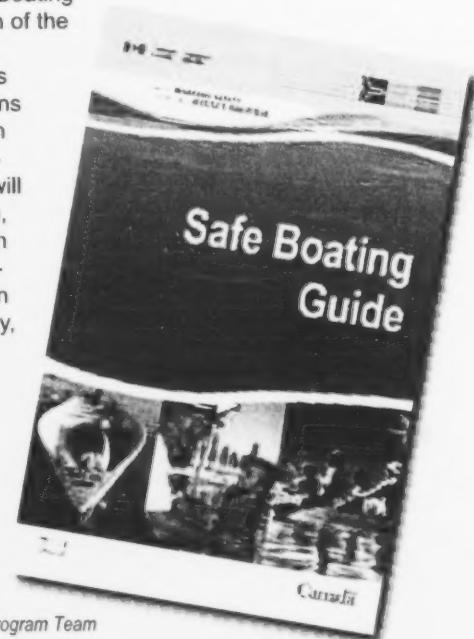
## LISTSERVE

Do you want to keep up to date on recreational boating safety information? The Office of Boating Safety's Electronic Mailing List will keep you informed on important boating safety information.

Sign up for Web site updates so that you can automatically receive current important recreational boating safety information. As information is updated or added to the Office of Boating Web site, an e-mail notice will be sent to you with the link to the change, as well as relevant background information. To learn more or to subscribe to this service, please visit [http://www.tc.gc.ca/marinesafety/debs/obs/news/mailing\\_list/menu.htm](http://www.tc.gc.ca/marinesafety/debs/obs/news/mailing_list/menu.htm). ■

The Safe Boating Guide, 2009 edition.

Photo Credit: Operator Competency Program Team



# 7th Annual Summer SAR Exercise

By David Schafer

Manitoba Office of the Fire Commissioner

On the weekend of August 22 to 24, 2008, the Manitoba Office of the Fire Commissioner and its partner agencies that make up Search and Rescue Manitoba (S.A.R.M.A.N.) sponsored the 7th Annual Summer Ground Search and Rescue Exercise in beautiful Spruce Woods Provincial Park. Approximately 110 members participated in this year's event, with 10 volunteer Search and Rescue (SAR) teams from across the province in attendance.

S.A.R.M.A.N. includes the policing authorities responsible for SAR in Manitoba, the federal and provincial SAR authorities in the province of Manitoba, and agencies mandated to support SAR efforts in Manitoba.

For the second year in a row, the annual weekend SAR exercise took on the form of a friendly competition. The two primary objectives were to provide provincial volunteer teams and responsible agencies with an opportunity to network and train together, and to help SAR team members further develop as many of their skills as possible during the exercise. The winner of this year's competition was the Grand Valley Mutual Aid Volunteer SAR Team from Western Manitoba.

Prizes were donated from local businesses to support the volunteer effort. A hearty supper was served to all participants after the exercise on Saturday evening, and a hot breakfast on Sunday morning before they returned home.

Guest observers included Josée Marengère and Anne-Marie Choquette both from the National Search and Rescue Secretariat (NSS), Harry Blackmore, president of the Search and Rescue Volunteer



Volunteers from Manitoba are working together during the exercise.

Photo Credit: David Schafer

This year's event was the first of six provincial exercises to be held in Manitoba over the next three years, thanks to the support of the NSS New Initiatives Fund. The province of Manitoba and S.A.R.M.A.N. wish to thank the NSS as well as all participating and observing agencies for making this year's event a great success. ■

Dave Schafer is the Manager of Operations - West for the Manitoba Office of the Fire Commissioner. The Office of the Fire Commissioner oversees the Ground and Urban Search & Rescue Networks in Manitoba and is a founding partner in the Search and Rescue - Manitoba "S.A.R.M.A.N." Association.



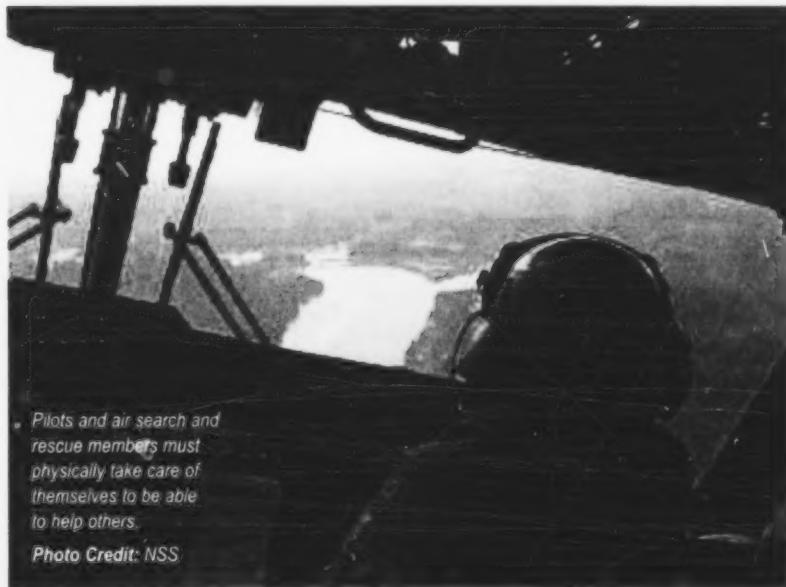
Many volunteers participated in the exercise in Spruce Woods Provincial Park.

Photo Credit: David Schafer

# Skies Wide Open

## Health and safety – Air SAR community

By Dr. Emily Roback, B.Sc., DC



Alberta's air rescue pilots want to know whether the actions performed by personnel in emergency planes and helicopters are worth the medical risks involved while attempting to rescue individuals.

Though riding in a rescue plane or helicopter has its risks, the Civil Air Search and Rescue Association (CASARA) in Red Deer, Alberta, has made significant strides since the mid-1980s in maintaining numerous hard-edged standards that enforce stricter health and safety procedures for their pilots, navigators, and spotters. According to Jim Thoreson, zone commander at CASARA, "The majority of our rescue pilots thrive on the adrenaline of flying." Recently, the association acquired its own liability policy, workers compensation board insurance and accidental death insurance to ensure proper coverage for those engaged in high-risk activities, such as air rescue.

As a chiropractor and air rescue trainee, I am learning visual search patterns, understanding the ergonomics of an aircraft, and providing health tips for aviators. To truly understand what rescue pilots and passengers experienced during the search of a missing person – and that despite my hearing impairment – I volunteered as a spotter. What I really appreciate and enjoy about my air-rescue encounters is that I can use my hearing aids and headset to communicate health strategies to all members of the rescue party without any difficulty.

### Fitness and well-being

The following are two different situations that demonstrate how valuable chiropractic care, nutrition, and exercise can be when practiced by private aviators and air search and rescue members:

**Case 1:** A 31-year-old storm aviator suffered lower back pain with mild leg stiffness. Muscle tightness and joint dysfunction was noted. With just one visit to

his chiropractor, the patient reported no further leg stiffness after his nine-hour flights. He started using a cushion to support his lower back, and he completed his neck and leg stretch routines from a seated position every twenty minutes.

**Case 2:** A 42-year-old professional aviator reported that he needed to improve his nutrition habits, lose unwanted weight, and ultimately reduce knee pain. The client received a series of assessments and subsequently was able to alter his lifestyle. Within two months, he lost centimeters around his mid-section and his knee discomfort had been eliminated. In fact, he now flies more than he usually did before due to increased attentiveness and energy levels.

### Taking care of ourselves

Today, all pilots are required to ensure the flight fitness of their airplanes, while also removing any and all potential hazards before taking off from the runway. It is also imperative that all aviators take the initiative to reach their own optimal health level while continuing to promote the safety of their passengers. Given the status of fitness in which many pilots appear to be, one could think that it takes less effort for an aviator to tolerate pain and discomfort than it does to implement strategies that improve their well-being.

As long as people in the aviation profession continue to take care of themselves and their colleagues in the air travel industry, they will be able to take care of others. ■

Dr. Emily Roback, president of Chiroback Trekker, provides chiropractic, sports therapy and injury prevention seminars for search and rescue teams in Alberta. Dr. Roback can be contacted at [roback@doctor.com](mailto:roback@doctor.com) and/or (403) 886-2044.

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